Appl. No.: 10/734,452

Amdt. dated 08/15/2005

Reply to Office action of June 20, 2005

Amendments to the Claims:

1. (Currently Amended) An ultrasonic inspection device, comprising:

a housing defining a channel for the passage of an ultrasonic signal;

a transducer in communication with the housing for transmitting and receiving the

ultrasonic signal therethrough;

a rotating reflector in communication with the channel to reflect the ultrasonic signal at

two or more preset angles; and

a locking mechanism to lock the rotating reflector at the preset angles, wherein the

locking mechanism comprises a spring-loaded ball and detent assembly.

2. (Original) An ultrasonic inspection device according to Claim 1, further comprising a

fixed reflector in communication with the channel for reflecting the ultrasonic signal.

3. (Original) An ultrasonic inspection device according to Claim 2 wherein the fixed

reflector directly reflects the ultrasonic signal to and from the transducer.

4. (Original) An ultrasonic inspection device according to Claim 2 wherein the rotating

reflector directly reflects the ultrasonic signal to and from the transducer.

5. (Original) An ultrasonic inspection device according to Claim 2 wherein the fixed

reflector comprises a rod with a polished 45 degree bevel and the rotating reflector comprises a

rod with a polished 45 degree bevel.

6. (Original) An ultrasonic inspection device according to Claim 1, further comprising a

handle attached to the rotating reflector for rotation of the rotating reflector.

7. (Currently Amended) An ultrasonic inspection device according to Claim 6 wherein

the locking mechanism spring-loaded ball and detent assembly comprises a spring-loaded ball in

the housing and at least one detent defined by the handle for selectively receiving the spring-

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loaded ball to rotatably lock the rotating reflector, wherein at least one detent of the springloaded ball and detent assembly the detents-corresponds with the preset angles.

- 8. (Currently Amended) An ultrasonic inspection device according to Claim 1 wherein the locking mechanism spring-loaded ball and detent assembly comprises a spring-loaded ball in the housing and at least one detent defined by the rotating reflector for selectively receiving the spring-loaded ball to rotatably lock the rotating reflector, wherein at least one detent of the spring-loaded ball and detent assembly the detents-corresponds with the preset angles.
- 9. (Original) An ultrasonic inspection device according to Claim 1 wherein the housing defines an aperture for the passage of the ultrasonic signal.
- 10. (Original) An ultrasonic inspection device according to Claim 9 wherein the aperture is arcuate and spans at least 90 degrees.
 - 11. (Currently Amended) An ultrasonic inspection device, comprising:
 - a housing having a channel for the passage of an ultrasonic signal;
- a transducer in communication with the housing for transmitting and receiving the ultrasonic signal therethrough;
 - a fixed reflector in communication with the channel to reflect the ultrasonic signal;
- a rotating reflector in communication with the channel to reflect the ultrasonic signal at a plurality of preset angles;
 - a handle attached to the rotating reflector for rotation of the rotating reflector; and
- a locking mechanism to lock the rotating reflector at the preset angles, wherein the locking mechanism comprises a spring-loaded ball and detent assembly.
- 12. (Original) An ultrasonic inspection device according to Claim 11 wherein the fixed reflector comprises a rod with a polished 45 degree bevel and the rotating reflector comprises a rod with a polished 45 degree bevel.

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13. (Currently Amended) An ultrasonic inspection device according to Claim 11 wherein the locking mechanism spring-loaded ball and detent assembly comprises a springloaded ball in the housing and at least one detent defined by the handle for selectively receiving the spring-loaded ball to rotatably lock the rotating reflector, wherein at least one detent of the spring-loaded ball and detent assembly the detents-corresponds with the preset angles.

- 14. (Currently Amended) An ultrasonic inspection device according to Claim 11 wherein the locking mechanism spring-loaded ball and detent assembly comprises a springloaded ball in the housing and at least one detent defined by the handle rotating reflector for selectively receiving the spring-loaded ball to rotatably lock the rotating reflector, wherein at least one detent of the spring-loaded ball and detent assembly the detents corresponds with the preset angles.
- 15. (Original) An ultrasonic inspection device according to Claim 11 wherein the housing defines an aperture for the passage of the ultrasonic signal.
- 16. (Original) An ultrasonic inspection device according to Claim 15 wherein the aperture is arcuate and spans at least 90 degrees.
- 17. (Currently Amended) A method of inspecting a component, comprising the steps of: positioning an ultrasonic inspection device proximate the component to be inspected such that an aperture defined by the ultrasonic inspection device opens toward the component;

utilizing a spring-loaded ball and detent assembly to locking a rotating reflector at a preset angle;

transmitting an ultrasonic signal through the ultrasonic inspection device such that the ultrasonic signal reflects from the rotating reflector toward a portion of the component;

moving the rotating reflector to another preset angle to facilitate inspection of another portion of the component; and

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transmitting additional ultrasonic signals through the ultrasonic inspection device such that the ultrasonic signal reflects from the rotating reflector toward an additional portion of the component.

- 18. (Original) A method according to Claim 17 wherein moving the rotating reflector comprises rotating a handle that is rotatably attached to the rotating reflector prior to transmitting additional ultrasonic signals.
- 19. (Original) A method according to Claim 18 wherein moving the rotating reflector comprises rotating the handle to a third preset angle prior to transmitting additional ultrasonic signals.
- 20. (Original) A method according to Claim 19 wherein moving the rotating reflector comprises:

rotating the handle to a plurality of preset angles and transmitting additional ultrasonic signals with the handle at each preset angle to inspect a first portion of the component; and

advancing the ultrasonic inspection device along the length of the component to a second portion of the component following the inspection of the first portion of the component and repeating the transmission of ultrasonic signals with the handle sequentially rotated to the plurality of preset angles to inspect the second portion of the component.

- 21. (Original) A method according to Claim 17, further comprising the step of advancing the ultrasonic inspection device along the length of the component while the rotating reflector remains locked at the preset angle and the ultrasonic signals are transmitted so as to inspect a lengthwise portion of the component at the preset angle prior to moving the rotating reflector to another preset angle.
- 22. (Original) A method according to Claim 21, further comprising the step of again advancing the ultrasonic inspection device along the length of the component after moving the

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rotating reflector to another preset angle to inspect further portions of the component along the length of the component at the other preset angle.